

Amendment dated February 17, 2004

Reply to Notice of Omitted Items of February 3, 2004

AMENDMENTS TO SPECIFICATION

Please replace the two paragraphs on page 5, lines 22-29 with the following single paragraph:

-- ~~Figure 6 provides a schematic diagram of a method of making process cheese according to Example 6 and using a high viscosity whey protein concentrate.~~

~~Figure 7~~ Figure 6 is a graph showing firmness (penetrometer values) for process

cheeses made with whey protein concentrates with various concentrations of calcium. Labels of the points on the graph refer to the specific product names of the WPCs. The process cheese for this experiment was 47 percent cheese and had a casein to whey ratio of 73:23. –

Please replace the paragraph spanning pages 12 (beginning on line 19) and 13 (ending on line 5) with the following paragraph:

-- "Emulsified high fat whey protein" is a fat stabilized by whey protein which is formed by preparing an emulsion of a dairy fat, whey protein, and water having an average particle size of about 0.5 to about 2 microns (preferably about 0.5 to about 1 microns) and which is then spray dried to form a powder. Preferably, the resulting powder has an average particle size of about 50 to about 400 microns. Preferably, the emulsified high fat whey protein contains about 40 to about 50 percent dairy fat, about 15 to about 20 percent whey protein, and about 1 to about 4 percent water. More preferably, this emulsion contains about 44 to about 46 percent dairy fat, about 18 to about 20 percent whey protein, and about 2 to about 3 percent water. The emulsified high fat whey protein can be employed in the present invention in the powder form or as reconstituted with an aqueous based liquid. This spray dried powder surprisingly has improved cheese-making functionality as compared to the

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individual ingredients. When used to prepared the process cheese of the present invention, the emulsified high fat whey protein provides good firmness and melting characteristics. The ~~the~~ emulsified high fat whey protein powder can also be used in other cheese-making processes.--

Please replace the paragraph spanning pages 18 (beginning on line 18) and 19 (ending on line 2) with the following paragraph:

-- Example 6. Production of a Process Cheese with High Whey Protein Concentration Using Modified High Viscosity Whey Protein Concentrate. This example provides a process cheese with high whey protein concentration as prepared by the method of the current invention ~~as illustrated in Figure 2~~. Cheddar cheese and 6.6 lbs milkfat were combined in a cooker and melted with 1.9 lbs of phosphate emulsifying salts. After melting the cheese at 160°F, a slurry of 4.0 lbs milk protein concentrate (Alapro 4700; New Zealand Milk Products, Santa Rosa, California), 6.3 lbs high viscosity whey protein concentrate (WPC34, Wisconsin Whey International, Juda, Wisconsin), and 2.8 lbs dried sweet whey (Krafen, Kraft Foods, Glenview, Illinois) in 15 lbs water was added to the cheese and cooked to 175°F for about 4 minutes. The cooked emulsion was poured into loaf forms and cooled. A control process cheese was prepared according to the method described above using normal whey protein concentrate in place of high viscosity whey protein concentrate. --

Please replace the paragraph on pages 19, lines 13-26 with the following paragraph:

-- Example 7. Production of a Process Cheese with High Whey Protein Concentration and Whey Protein Concentrates with Varying Calcium Concentrations. This example provides a process cheese with high whey protein concentration and varying calcium concentrations in whey protein concentrate used

to make the process cheese using a standard process cheese protocol. A series of process cheeses were prepared using the following procedure: 26.2 lbs cheese and 6.6 lbs milkfat were combined in a cooker and melted with 1.9 lbs of phosphate emulsifying salts. After melting the cheese at 160°F, a slurry of 4.0 lbs milk protein concentrate (Alapro 4700; New Zealand Milk Products, Santa Rosa, California), 6.3 lbs whey protein concentrate (with varying concentrations of calcium as indicated below and in FIG. 7 FIG. 6) and 2.8 lbs dried sweet whey (Krafen, Kraft Foods, Glenview, Illinois) in 15 lbs water was added and cooked to 175°F for about 4 minutes. The cooked emulsion was poured into loaf forms and cooled. --

Please replace the paragraph on page 20, lines 5-16 with the following paragraph:

--Cheese with high whey protein concentrations prepared using whey protein concentrates with less than 3000 ppm calcium had acceptable firmness and softening point. The casein to whey protein ratio of the finished product was 73:27 based on the composition of the ingredients. Despite the fact that this ratio was less than the previously described limit of 3:1, as the calcium content of the WPC80 decreased from 4890 ppm to 2620 ppm, the firmness of the resulting process cheese loaf increased to acceptable levels, as seen by the penetrometer penetration decrease from 24 to 17 (Table 1) (FIG. 6). As in previous Examples, a firmness below 20 is desired. Therefore, process cheese made with whey protein concentrates having a calcium content below 3000 ppm results in process cheese with acceptable firmness, despite having a casein to whey protein ratio less than 3:1.

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NOTICE OF OMITTED ITEM(S)

The Notice of Omitted Item(s) indicated that "Figure(s) 7 described in the specification" was omitted from the application.